

METHODS AND APPARATUS FOR ADDING A UNIQUE SIGNATURE TO NETWORK DATA TRAFFIC

ABSTRACT OF THE DISCLOSURE

A method and apparatus for providing a unique signature that can be added to network data traffic to aid in the analysis or processing of the data reports associated with the data. Network monitors located along the network connections serve as data reduction devices. The monitors detect instances of network data, i.e. data packets, and derive from the data packets certain information that can be used to uniquely identify the data packet. For TCP transmissions, such information might include the client and source IP addresses, the client and source port numbers, and the client and source sequence numbers. The information is organized into an input string and the hash function produces an output string which can be used as the unique signature. The signature can be truncated to use fewer bits, and a flag might be added to indicate the type of application associated with the data. Once the signature is formed, it is attached to data reports that are sent from the monitors to a central collector. The central collector uses the signatures to process, compare, and even eliminate, duplicate data reports.